



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-591-311GB
Job Sheet 165882



Part No: D350-591-311GB

Job Qty: 1 ea

Part Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black



Part Weight: 0 lbs

Status: Production

Priority: Medium

Job Created: 10/2/17

Job Tracking No:

Due Date: 10/31/17

Created By: Linda Lacelle

Type: Stock

Description:

CHG 001

Customer: US Helicopters Inc (CUSHE01)

PO Box 625 Marshville, NC, 28103 USA ph:(704) 233-5000 fx:(704) 233-4255.

Note: DWG REV B

Ship Via:

Bill of Materials

Part/Part Name	Part Note	Serial No	Quantity	Location
D350-591-311GB	DWG REV B		0.000	
Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black				
AN3-35A			0.000	
Bolt				
AN4-13A			0.000	
Bolt				
AN5-36A			0.000	
Bolt				
D2230-3	DWG REV G IPP D 00.05.18 Added inspection level 8, and removed P/O for powder coat EC IPP REV :E NEW FOLIO # 10-05-25 JLM VERIFIED BY:EC		0.000	
Mounting Lug				
D2618	DWG REV B1 IPP Rev:F Re-format 05-11-22 JLM		0.000	
Bushing				
D2856-400	DWG REV A IPP D 02.08.28 Re-format; Added clear & 108 foot roll to Step 2 KJ/RF		0.000	
Abrasion Strip 4" Wide (Per Foot)				
D3065-041	DWG REV B IPP Rev: C 02.11.01 Incorporated D3066-1 IPP KJ/RF		0.000	
Step Leg Assembly				
D3066-1	DWG REV B IPP: C 02.11.01 Incorporated D3066-1 IPP KJ/RF IPP Rev:B Now M6061-T6 06-06-23 JLM		0.000	
Spacer				
D3067-1	DWG REV A IPP: 03.01.21 Remove step 6 (Deburr) KJ IPP Rev:B Now on Water jet 06-06-16 JLM		0.000	
End Plate				
D3067-1	DWG REV A IPP: 03.01.21 Remove step 6 (Deburr) KJ IPP Rev:B Now on Water jet 06-06-16 JLM		0.000	
End Plate				
D3219-1	DWG REV B IPP A 04.04.19 New issue KJ/JLM ESR B 06.05.25 Waterjet EC		0.000	
Plate				
D3235-1	DWG REV A IPP A 04.04.19 New issue KJ/JLM		0.000	
Mounting Lug				
D3272-1	DWG REV B IPP Rev:A New Issue 07-06-09 JLM		0.000	
Step				
D3278-041	DWG REV C IPP: A 04.04.19 New issue KJ/JLM IPP B 07.08.21 Chg rivet per PAR185 EC Verified by: JLM		0.000	
Support Assembly				
MS20600-AD4W4			0.000	
Rivet				
MS21042L3	DWG REV A		0.000	
Nut				
MS21042L4			0.000	
Nut				
			0.000	

MS21042L5

Nut

NAS1149D0363J

Washer

0.000

NAS1149D0463J

Washer

0.000

NAS1149D0563J

Washer

0.000

Job Routing

Op No	Operation	Qty	Due Date	Standard		Workcenter/Supplier	
				Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
90	Start up Operation	1 Ea	10/31/17	0.00	0.00	Start up container	
180	Large Fab	1 pcs	10/31/17	0.00	0.00	Large Fab 2	0.2570 (3.89)
220	Powdercoat	1 pcs	10/31/17	0.00	0.00	Powdercoat12	BK-17-11-28
230	HandFinish	1 pcs	10/31/17	0.00	0.00	HandFinish3	1.3513 (0.74)
240	QC	1 pcs	10/31/17	0.00	0.00	QC3	
250	Packaging	1 pcs	10/31/17	0.00	0.00	Packaging1	
260	QC	1 pcs	10/31/17	0.00	0.00	QC4	Smf
270	Packaging	1 pcs	10/31/17	0.00	0.00	Packaging3	Smf
280	QC21-FG	1 Ea	10/31/17	0.00	0.00	QC21	17/12/12

Part Op 180 - 1-Assemble Leg Assembly as per Dwg D3272. 2-Leave one rivet out until welding is complete. 3-Bevel Aft end for Descriptions: welding 4-Inspect for foreign object as per QSI 024 5-Weld Aft End Plate as per QSI 004 & Dwg D3272 A/R Aluminum Rod 6-Grind End Plate flush 7-Install last rivet as per Dwg.

220 - START TIME: 11:20 OVEN TEMPERATURE: 820° FINISH TIME: 11:50

270 - Identify and pack for shipping as per PPPD350-591-312 Location :FG072

M 12288. wing walk M138373

Job BOM

Part / Item	Component Name	Quantity	Operation	Special Comments
D3272-1	Step	1 Ea (1 ea)	90-Start up Operation	
D350-591-311GB B165882		1 Ea (1 ea)	90-Start up Operation	
AN3-35A	Bolt	2 Ea (2 ea)	250-Packaging	
AN4-13A	Bolt	8 Ea (8 ea)	250-Packaging	
AN5-36A	Bolt	2 Ea (2 ea)	250-Packaging	
D2230-3	Mounting Lug	4 Ea (4 ea)	250-Packaging	
D2618	Bushing	2 Ea (2 ea)	250-Packaging	
D2856-400	Abrasion Strip 4" Wide (Per Foot)	1.2000 Ea (1.2 ea)	250-Packaging	
D3235-1	Mounting Lug	2 Ea (2 ea)	250-Packaging	
D3278-041	Support Assembly	1 Ea (1 ea)	250-Packaging	
MS21042L3	Nut	2 Ea (2 ea)	250-Packaging	
MS21042L4	Nut	8 Ea (8 ea)	250-Packaging	
MS21042L5	Nut	2 Ea (2 ea)	250-Packaging	
NAS1149D0363J	Washer	4 Ea (4 ea)	250-Packaging	
NAS1149D0463J	Washer	16 Ea (16 ea)	250-Packaging	
NAS1149D0563J	Washer	4 Ea (4 ea)	250-Packaging	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D3272-1	1	0	0	0
	D350-591-311GB B165882	1	1	0	0
250-Packaging	AN3-35A	2	0	0	0
	AN4-13A	8	0	0	0
	AN5-36A	2	0	0	0
	D2230-3	4	0	0	0
	D2618	2	0	0	0
	D2856-400	1	0	0	0
	D3235-1	2	0	0	0
	D3278-041	1	0	0	0
	MS21042L3	2	0	0	0
	MS21042L4	8	0	0	0
	MS21042L5	2	0	0	0
	NAS1149D0363J	4	0	0	0
	NAS1149D0463J	16	0	0	0

Part Specifications

Specifications could not be found.

Plex 10/2/17 9:09 AM Dart.Renwick.Jennifer

DART
AEROSPACE
S014319

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Heli - Access - Step LH - High Gear, Long Step, Aerazur
Float Compatible - Glossy Black

PART NO: D350-591-311GB

Revision:

Operation: Start up Operation

Change No:

Mfg Date: 11/27/17

Job No: 165882

Work Order Summary

Thursday, September 28, 2017 10:07:25 AM

Page 1 of 2

Criteria : Work Order ID: 165882 Item ID: D350-591-311GB Product Family LARGE FAB
 Work Order Start Dates 9/11/2017 to 9/11/2017 11:59:59 PM Work Order Required Dates 9/21/2017 to 9/21/2017 11:59:59 PM
 All References
 Work Order Status Released

Work Order ID	165882	Required Qty	1.0000	Status Code	Released
Item ID	D350-591-311GB	Accepted Qty	0.0000	Scrap Qty	0.0000
Item Name	Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black				
Current Acct Value	\$290.917				
Start Date	9/11/2017	Required Date	9/21/2017	Completed Date	
Standard	** Actual **		** Acct. Value **	** Variance **	** Variance % **
Direct Costs	Total	Each	Each	Each	Each
Material	\$15.846	\$0.000	\$0.000	\$0.000	0.00%
Labor	\$121.895	\$0.000	\$91.934	\$91.934	100.00%
Outplant	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Variable Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Fixed Burden	\$267.014	\$0.000	\$198.983	\$198.983	100.00%
Material Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
** Total **	\$404.755	\$0.000	\$290.917	\$290.917	

Item ID/Item Name	Required Qty	Issue Code	Issue Date	Issued Qty	Cost Amount
D3065-041 Step Leg Assembly	1.0000		9/20/2017	1.0000	\$72.082
D3066-1 Spacer	2.0000		9/20/2017	2.0000	\$8.709
D3067-1 End Plate	2.0000		9/12/2017	2.0000	\$4.277
D3219-1 Plate	2.0000		9/28/2017	2.0000	\$7.022
MS20600-AD4W4 Rivet	16.0000		9/20/2017	16.0000	\$2.880
Total Matl Amts:					\$94.969

Work Center HandFinish

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
LECO02												
9/19/2017												
140			0.00	0.00	1.54	0.51	3.00	\$0.000	\$11.183	\$27.915	\$0.000	\$39.098
9/21/2017												
210			0.00	0.00	0.68	0.23	3.00	\$0.000	\$4.954	\$12.365	\$0.000	\$17.319

Total:	0.00	0.00	2.22	0.74	6.00	\$0.000	\$16.137	\$40.280	\$0.000	\$56.417
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Work Center Large Fab

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
GAUT02												
		9/15/2017										
110			0.00	0.00	0.57	0.57	1.00	\$0.000	\$12.296	\$24.958	\$0.000	\$37.254
lavi01												
		9/13/2017										
110			0.00	0.00	0.38	0.38	1.00	\$0.000	\$8.194	\$16.631	\$0.000	\$24.825
110			0.00	0.00	0.77	0.77	1.00	\$0.000	\$16.626	\$33.747	\$0.000	\$50.373
lu01												
		9/20/2017										
180			0.00	0.00	2.16	2.16	1.00	\$0.000	\$46.511	\$94.406	\$0.000	\$140.917
Total:			0.00	0.00	3.89	3.89	4.00	\$0.000	\$83.626	\$169.742	\$0.000	\$253.369

SEP 15 2017

Work Order ID 165882

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Page 2

Item ID: D350-591-311GB Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black
Start Date: 9/11/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/21/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				<u>1x</u>		DAS 43 9-89	SEP 19 2017
130 *130* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.02				<u>1x</u>		DAS 43 9-89	SEP 19 2017
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.41				<u>①</u>	<u>Ø</u>	2017-09-19	SEP 19 2017 JL

Work Order ID 165882

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Page 3

Item ID: D350-591-311GB Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black
Start Date: 9/11/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/21/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.01

Quality Control

/ SEP 20 2017 DAS 24 9-89

180

Weld per dwg A/R Aluminum rod Batch: _____

0.00

180

Large Fab

Large Fab

Memo

0.40

Large Fab

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272
A/RAluminum Rod M137078

6-Grind End Plate flush

7-Install last rivet as per Dwg.

x1 SL 2017.9.20

Work Order ID 165882

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Item ID: D350-591-311GB Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black
Start Date: 9/11/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/21/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190	QC10- Inspect visual per OSI004- ground welds	0.00							
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190

QC

Memo

0.00

Quality Control

1	SEP 21 2017	DAS 24 9-89
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200	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

200

QC

Memo

0.02

Quality Control

1	SEP 21 2017	DAS 24 9-89
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210	Chemical Conversion Coat per QSI005 4.1	0.00							
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210

HandFinish

Memo

0.10

Hand Finishing

①	2017-09-27	378 JL
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Work Order ID 165882

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Item ID: D350-591-311GB**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black**Start Date:** 9/11/2017 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 9/21/2017 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
250									
Packaging	Memo	0.01							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
260									
QC	Memo	0.03							
Quality Control									
270	Identify as per dwg & Stock Location: _____	0.00							
270									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-591-312 Location :FG072								

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NS1

NS2

Customer:

NR1

NR2

NR2

**Insp.
Stamp**

0.10

Quality Control

Picklist Print

Thursday, September 07, 2017 11:10:48 AM

Page 1

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A04.03.22New issue KJ/RF
IPP Rev:B 07-06-09 Added D3572-1 JLM
IPP Rev:C 08-04-02 ECN1163 DD verified by:EC
IPP Rev:D 08-04-08 ECN1164 DD verified by:eC IPP Rev:D
fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3-35A *AN3-35A* Bolt		Purchased	No			250	Each	62.0000	2	2			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		10							
				122800		10							
				ST348		52							
				M138170		52							
AN4-13A *AN4-13A* Bolt		Purchased	No			250	Each	148.0000	8	8			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		20							
				122808		20							
				GA		9							
				m135470		9							
				ST344		119							
				m138326		119							
AN5-36A *AN5-36A* Bolt		Purchased	No			250	Each	44.0000	2	2			
**													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST336		44							
				m137963		44							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

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Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

D2230-3

Manufactured No

250

Each

Start Qty: 1.00
208.0000 4 4

Required Qty: 1.00

D2230-3

USE 165998

Mounting Lug

**

Location

Loc Qty

Loc Code

FG

4

109344

4

ST521

204

163291

44

164011

160

ATTN: GLOSSY BLACK

D2618

Manufactured No

250

Each

57.0000 2 2

D2618

Bushing

**

Location

Loc Qty

Loc Code

ST008A

57

163460

7

164495

50

D2856-400

Manufactured No

250

f

310.5810 1.2 1.2

D2856-400

Abrasion Strip 4" Wide (Per Foot)

**

Location

Loc Qty

Loc Code

ST410

216

165754

216

ST418

94.58099526

146265

27.4088853

152590

29.89211

160547

37.28

5/16/2018

cut (2) D2856-400-720 as per dwg

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ - Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Picklist Print

Thursday, September 07, 2017 11:10:48 AM

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

D3065-041

Manufactured No

180

Each

27.0000

Start Qty: 1.00

Required Qty: 1.00

D3065-041

Step Leg Assembly

**

~~DG 2017-09-12~~

Location

Loc Qty

Loc Code

WA002

27

162415

2

164384

1

165204

24

180

Each

54.0000

2

2

**

~~DG 2017-09-12~~

SL 2017-9-20

D3066-1

Manufactured No

D3066-1

Spacer

Location

Loc Qty

Loc Code

WA003

54

159117

4

162500

50

110

Each

10.0000

1

(X1)

**

~~DG 2017-09-12~~

D3067-1

Manufactured No

D3067-1

End Plate

Location

Loc Qty

Loc Code

WA003

10

163742

10

180

Each

10.0000

1

1

**

~~DG 2017-09-12~~

D3067-1

Manufactured No

D3067-1

End Plate

Location

Loc Qty

Loc Code

WA003

10

163742

10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Picklist Print

Thursday, September 07, 2017 11:10:49 AM

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

D3219-1 Manufactured No

110 Each 22.0000 2 2

Start Qty: 1.00

Required Qty: 1.00

D3219-1

Plate

**

DC 2017-09-12

Location

Loc Qty

Loc Code

WA003

22 3165867 => 2

162848

2

165567

20

D3235-1 Manufactured No

250 Each 53.0000 2 2

D3235-1

Mounting Lug

**

USE 166008

Location

Loc Qty

Loc Code

ST522

53

162757

53

ATTN: GLOSSY BLACK

D3272-1 Manufactured No

110 Each 11.0000 1 1

D3272-1

Step

**

Location

Loc Qty

Loc Code

WA003

11

164356

10

164968

1

D3278-041 Manufactured No

250 Each 23.0000 1 1

D3278-041

Support Assembly

**

USE 165921

Location

Loc Qty

Loc Code

ST522

23

160701

2

162850

1

164347

20

ATTN: GLOSSY BLACK

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Picklist Print

Thursday, September 07, 2017 11:10:49 AM

Page 5

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

MS20600-AD4W4

Purchased

No

180

Each

Start Qty: 1.00
1,517.000 16 16

Required Qty: 1.00

MS20600-AD4W4

Rivet

Location

Loc Qty

Loc Code

CCK004

1000

M138441

1000

ST308

29

M138209

29

WA003

488

M135442

204

M136986

108

M137412

63

M137820

21

M138209

92

MS21042L3

Purchased

No

250

Each

1,768.000 2 2

MS21042L3

Nut

Location

Loc Qty

Loc Code

FP001

72

m135945

72

GA

336

m134360

102

M136665

234

OVER007

500

m138408

500

ST303

860

m138230

500

m138326

360

x16 S.L 2017-9-20

Thursday, September 07, 2017 11:10:49 AM

Shop Packet Print

Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, September 07, 2017 11:10:49 AM

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

MS21042L4 Purchased No 250 Each 2,201.000 8 8 Start Qty: 1.00 Required Qty: 1.00

MS21042I 4

Nut

Location	Loc Qty	Loc Code
FP001	10	
m133363	10	
OVER007	1000	
m138170	500	
m138230	500	
ST303	1191	
m138084	191	
m138326	1000	

MS21042L5

Purchased No 250 Each 423.0000 2 2

MS21042I 5

Nut

Location	Loc Qty	Loc Code
GA	10	
m127813	10	
ST303	413	
m137587	4	
m137963	109	
m138209	200	
m138336	100	

NAS1149D0363J

Purchased No 250 Each 1,339.000 4 4

NAS1149D0363.I

Washer

Location	Loc Qty	Loc Code
GA	408	
m137963	408	
ST263	931	
126319	16	
m138336	915	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER : _____							
Misidentified	☐	Past Due								

Picklist Print

Page 7

Thursday, September 07, 2017 11:10:49 AM

Work Order ID: 165882

165882

Parent Item: D350-591-311GB

D350-591-311GB

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible-Glossy Black

Start Date: 9/11/2017

Required Date: 9/21/2017

NAS1149D0463J

Purchased

No

250

Each

Start Qty: 1.00
2,122.000 16 16

Required Qty: 1.00

NAS1149D0463.J******

Washer

LocationLoc QtyLoc Code

GA

451

M135056

40

M137699

411

Return2017

16

M136665

16

ST263

1655

M137988

600

M138084

27

M138230

1028

NAS1149D0563J

Purchased

No

250

Each

1,371.000 4 4

NAS1149D0563.J******

Washer

LocationLoc QtyLoc Code

GA

36

m135774

36

ST263

1335

m138040

635

m138209

700

Thursday, September 07, 2017 11:10:49 AM

Shop Packet Print

Page 7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Misabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								



DESIGN <i>GP</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07.06.04 *H*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *165882*

AM SEP 07 2017

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

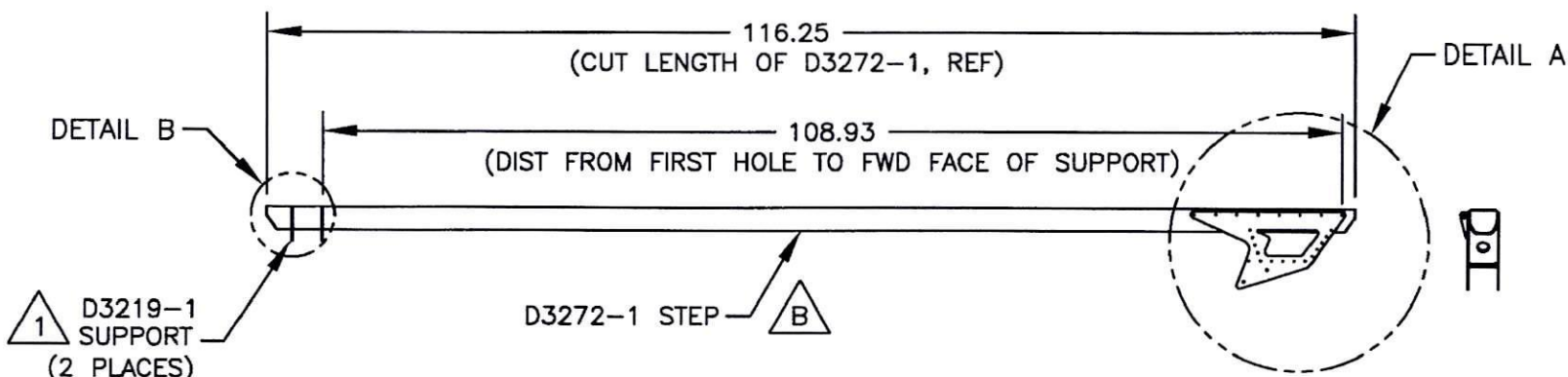
QA Closed: _____ Date: _____

Work Order update only ☐

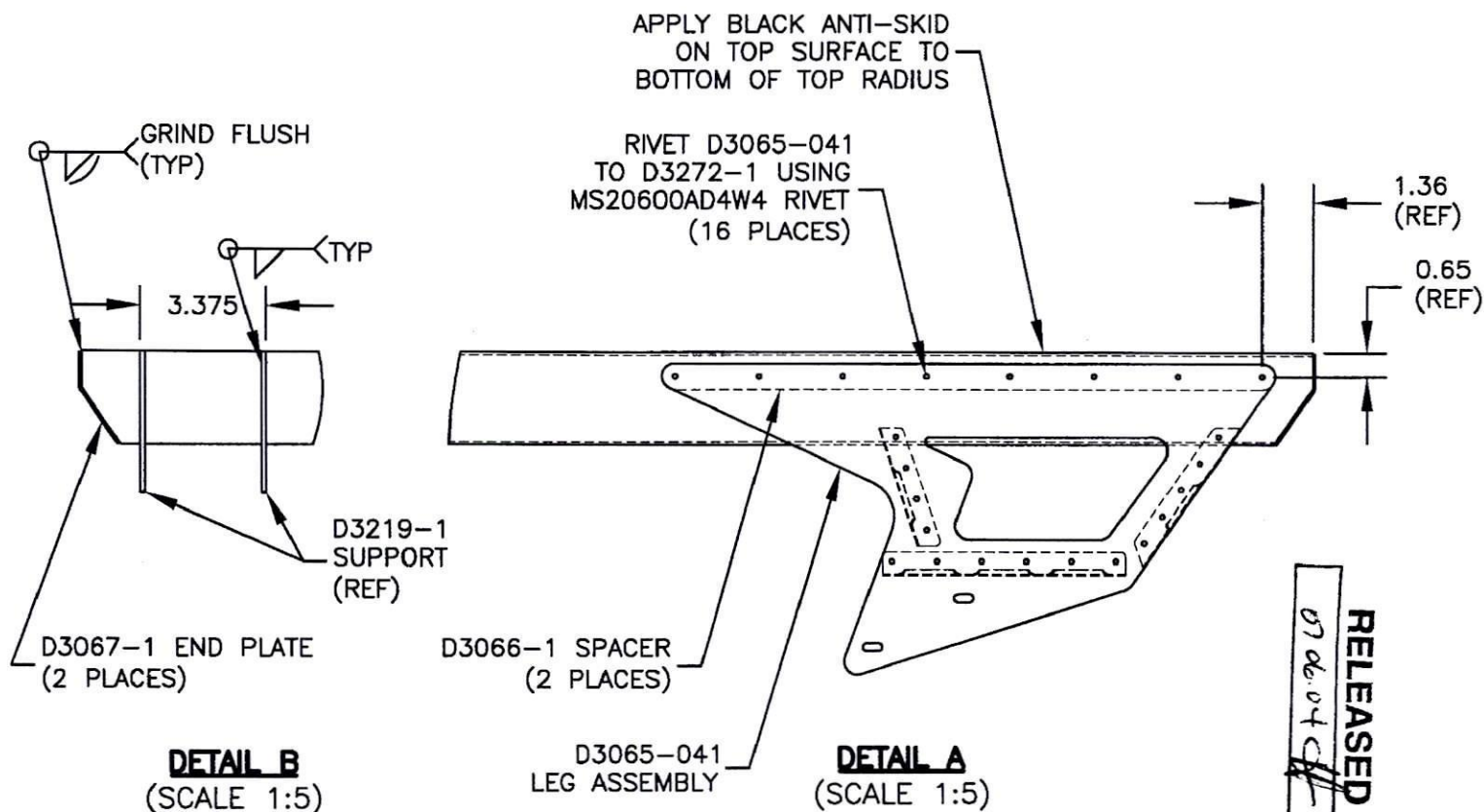
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		☐ OTHER : _____							

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD	REV. B
CHECKED <i>CP</i>	APPROVED <i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
DATE	DRAWING NO.	SHEET 2 OF 3	SCALE
07.05.18	D3272	STEP ASSEMBLY, HI LONG	1:20



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

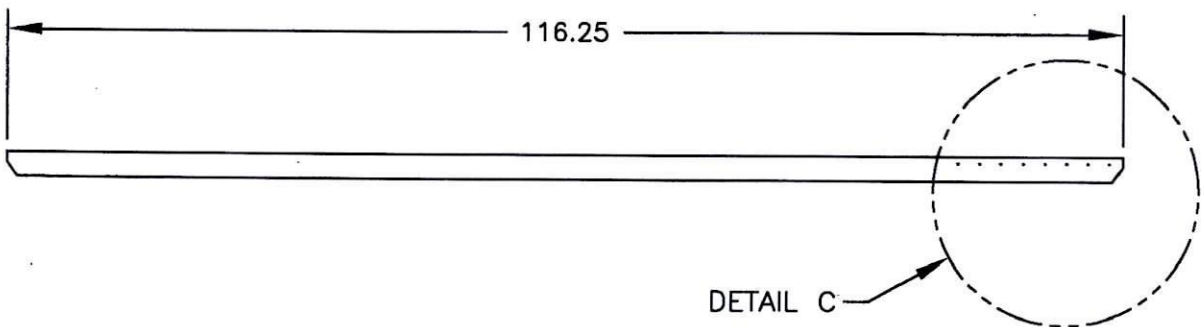
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		☐ OTHER : _____							

DART

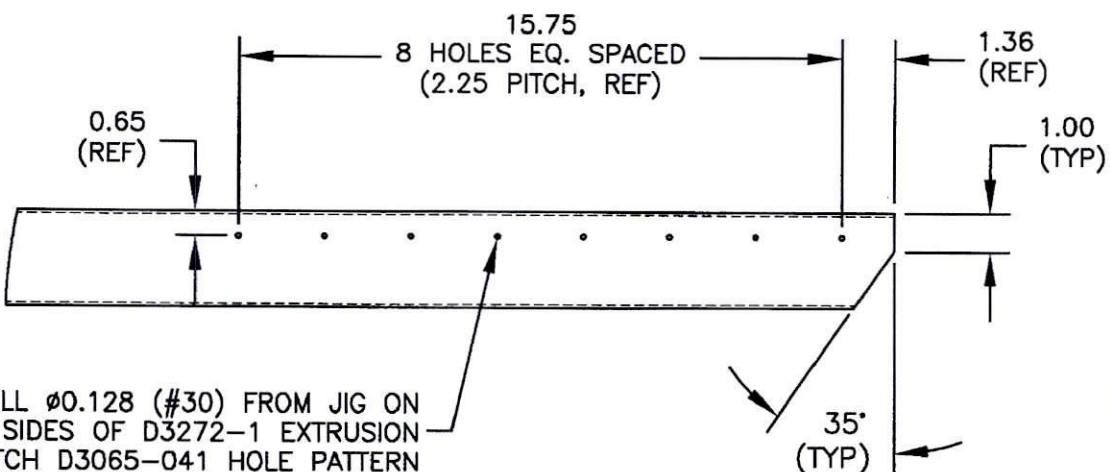
DESIGN	APPROVED	DRAWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA
CHECKED	CE	APPROVED	DRAWING NO. D3272
DATE	07.05.18	TITLE	STEP ASSEMBLY, HI LONG
		SCALE	1:20
		SHEET	3 OF 3

RELEASED

07.06.04



B D3272-1 STEP
(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL $\phi 0.128$ (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
		OTHER :							